S/121/63/000/001/005/014
A004/A126

AUTHORS: Podurayev, V.N., Barkhordov, A.M.

TITLE: Utilizing natural oscillations for breaking chips

PERIODICAL: Stanki i instrument, no. 1, 1963, 17 - 20

TEXT: Since the various mechanical, hydraulic, pneumatic or electrical methods of producing the necessary vibrations for crushing chips require more or less intricate devices, the authors suggest using for the breaking of chips the natural oscillations originating due to the cutting process. Natural oscillations during the cutting process may be produced 1) by an efficient change of the elastic system machine - workpiece - tool by using special devices, 2) by selecting appropriate cutting conditions and tool geometry with the given system machine - workpiece - tool without any special devices. The authors give a detailed description of both methods, describe a vibrating saddle developed on the basis of investigations carried out by the MVTU im. Bauman, enumerate the factors determining the chip-breaking conditions and point out that the test results obtained prove that this mechanical vibrating saddle ensures reliable chip-breaking during rough turning. There are 6 figures.

Card 1/1

SATEL', E.A., zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn.nauk, prof.; PODURAYEV, V.N., kand.tekhn.nauk, dotsent; TUKTANOV, A.G., inzh.; SUVOROV, A.A., inzh.

Vibration drilling of holes in stainless and heat-resistant steels. Vest.mash. 42 no.1:67-70 Ja '62. (MIRA 15:1)
(Drilling and boring)

1. PODURAZHNYY, P.K.; STIKHIN, A.F.

2. USSR (600)

4. Meadows

7. Experience of the Khrushchev Collective Farm in rapid development of meadows, P.K. Podurazhnyi, A.F. Stikhin, Sots.zhiv. 15 no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

AFENDULOV, K.P., kand. sel'skokhoz. nauk; BOYKO, Ye.I., kand. sel'skokhoz. nauk; PEREMERAY, Ye.A., kand. sel'skokhoz. nauk; PODURAZHNYY, P.K. kand. sel'skokhoz. nauk; PONAMARENKO, F.K.

Practices in the intensive use of land. Zemledelie 27 no.6:15-20 Je '65. (MIRA 18:9)

1. Chernigovskaya oblastnaya sel'skokhozyaystvennaya opytnaya stantsiya. 2. Glavnyy agronom opytnogo khozyaystva Chernigovskoy oblastnoy sel'skokhozyaystvennoy stantsii (for Ponomarenko).

ZEL'DOVICH, Ya.B.; PODURETS, M.A.

Evolution of a system of gravitationally interacting point masses.
Astron.zhur. 42 no.5:963-973 S-O '65. (MIRA 18:10)

S/0020/64/156/001/0057/0060

ACCESSION NR: AP4035809

AUTHOR: Zel'dovich, Ya. B. (Academician); Podurets, M. A.

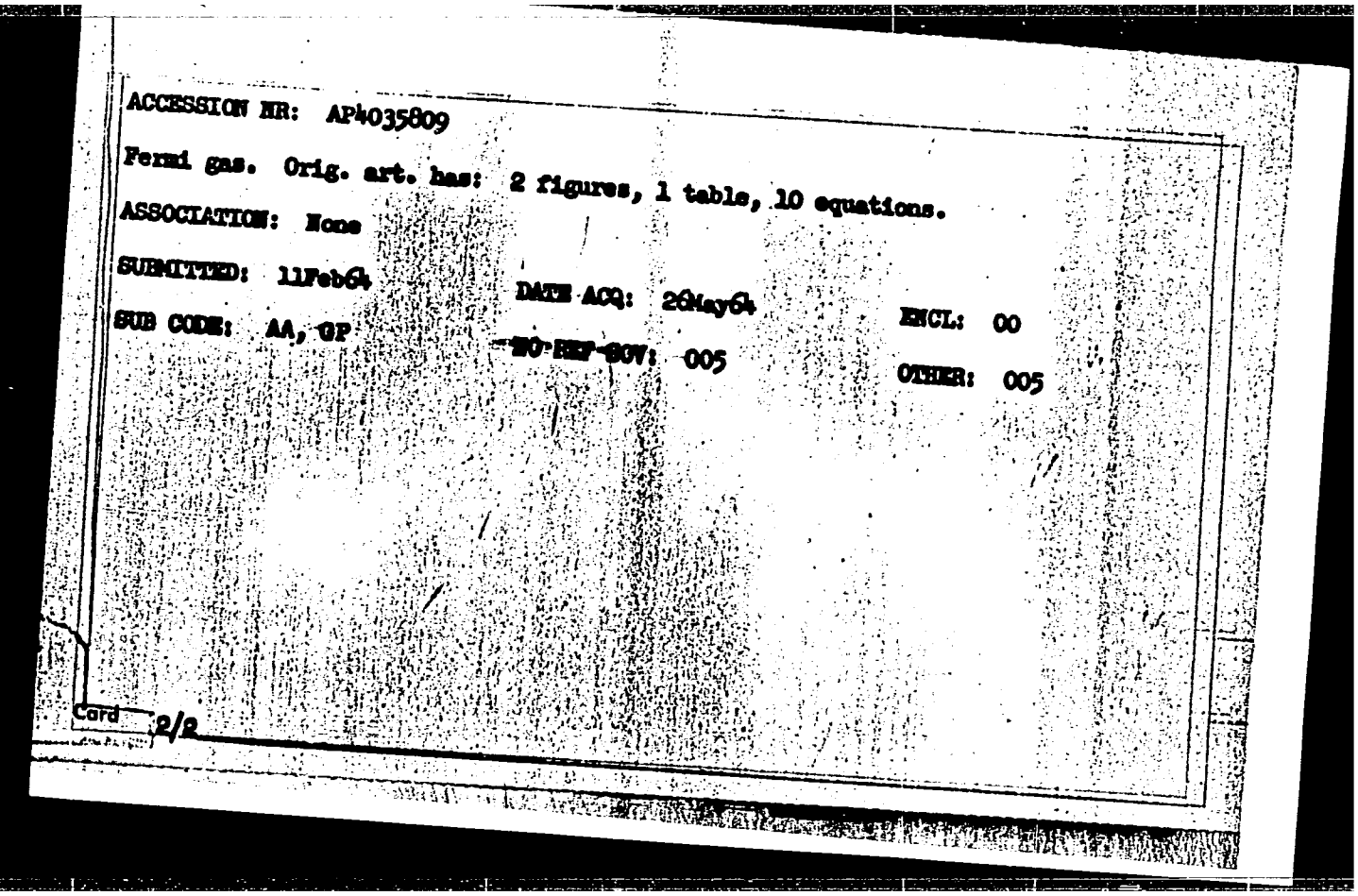
TITLE: Neutrino emission of a star during gravitational collapse in the general theory of relativity

SOURCE: AN SSSR. Doklady*, v. 156, no. 1, 1964, 57-60

TOPIC TAGS: neutrino emission, gravitational collapse, star self locking, general relativity theory, superstar collapse, superstar

ABSTRACT: The theory of a gravitational collapse was given by J. Oppenheimer et al (Phys. Rev. 56, 455 (1939)), and is now of interest because of the discovery of superstars. The theory, based on general theory of relativity, shows that the emission of light by the star into outer space approaches zero when the radius of the collapsing star reaches a certain value (gravitational radius). The star is gravitationally self-locked. The authors have investigated the gravitational self-locking with respect to neutrino emission. The origin of neutrinos is assumed to be in the center of the star so that Doppler-effect is absent. Two cases are considered: (1) collapse of dust, (2) collapse of a star from a cold

Card 1/2



ACCESSION NR: AP4035809

Fermi gas. Orig. art. has: 2 figures, 1 table, 10 equations.

ASSOCIATION: None

SUBMITTED: 11Feb64 DATE ACQ: 26May64 ENCL: 00

SUB CODE: AA, GP NO REF SOV: 005 OTHER: 005

Card 2/2

PODURETS, M.A.

Asymptotic behavior of the optical brightness of a star at gravitational collapse in the general theory of relativity. Astron. zhur. 41 no.6:1090-1096 N-D '64 (MIRA 18:1)

FOGURETS, M.A.

Form of the Einstein equations for spherical symmetrical motion of a continuous medium. Astron.zhur. 41 no.1:28-32 Ja-F '64.
(MIRA 17:4)

PODUROVA, K.N.

Characteristics of the function of the reticuloendothelial system during the development of transplanted cancer. Uch. zap. Ped. inst. Gerts. 179:277-295 '58. (MIRA 16:5)

(CANCER) (RETICULOENDOTHELIAL SYSTEM)

FODUROVSKAYA, M.A., ordinator

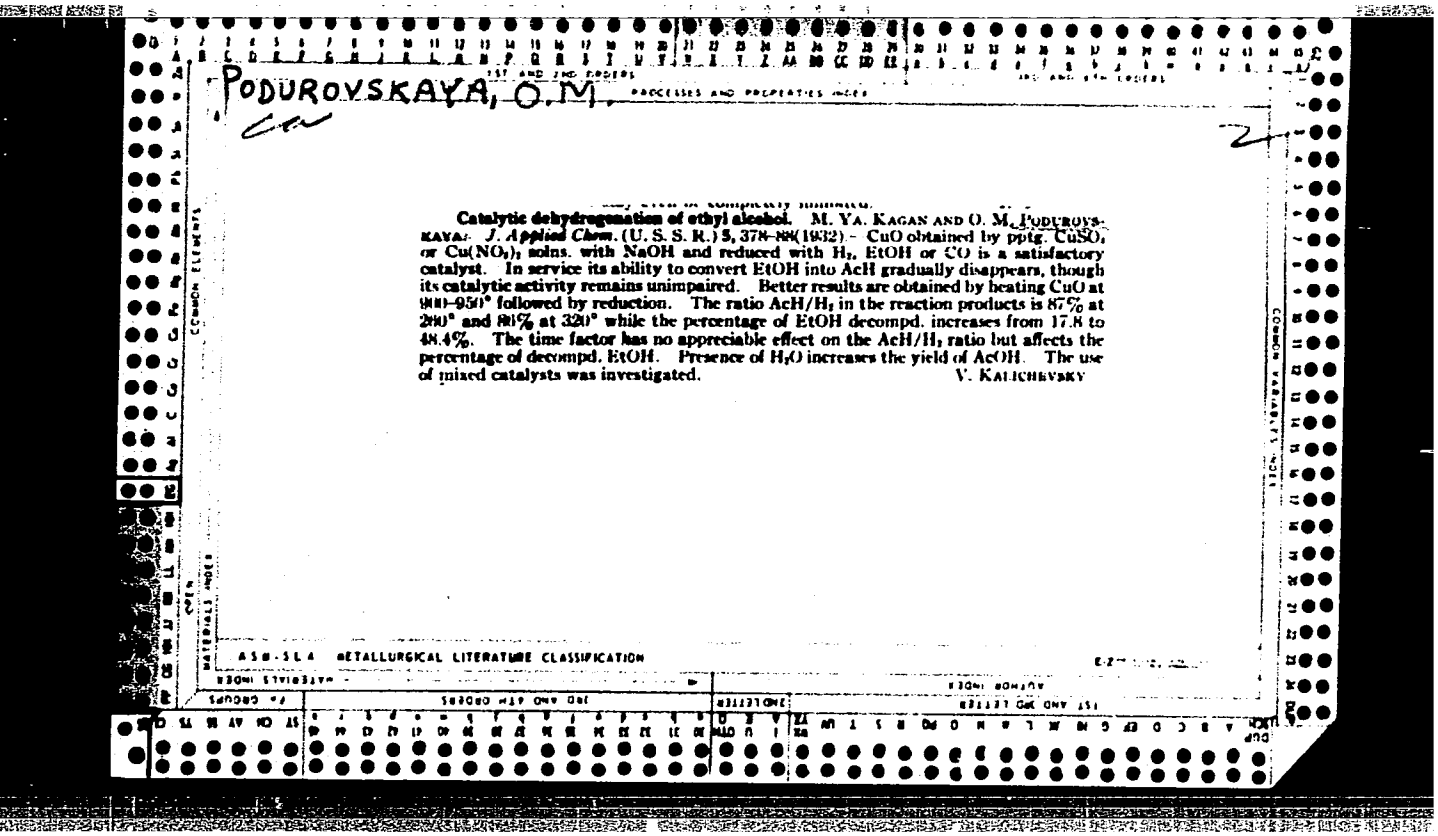
Effectiveness of combined treatment of cancer of the uterine body. Sbor. nauch. trud. Rost. gos. med. inst. no.41:65-69 '63. (MIRA 17:11)

1. Iz ginekologicheskogo otdeleniya (zav. otdeleniyem V.I. Avramova) Gorodskoy bol'nitsy No.2 Rostova-na-Donu (glavnyy vrach A.G. Sobastnyy); nauchnyy rukovoditel' -prof. P.Ya. Lel'chuk.

PETRAKOVICH, V.Ye.; PODUROVSKAYA, O.M.; TUR'YAN, Ya.I.

Comparison of platinum oxide and glass indicator electrodes in acid-base titration. Effect of nonaqueous solvents, the nature of the titrant, and various additions. Zhur. anal. khim. 20 no.8:785-789 '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti, Moskva, i Yaroslavskiy nauchno-issledovatel'skiy institut monomerov.



PODUROVSKAYA, O.M.

Catalytic dehydrogenation of ethyl alcohol. M. YA. KAGAN AND O. M. PODUROVSKAYA. *J. Applied Chem.* (U. S. S. R.) 5, 378–88(1932).—CuO obtained by pptg. $CuSO_4$ or $Cu(NO_3)_2$ solns. with NaOH and reduced with H_2, EtOH or CO is a satisfactory catalyst. In service its ability to convert EtOH into AcH gradually disappears, though its catalytic activity remains unimpaired. Better results are obtained by heating CuO at 900–950° followed by reduction. The ratio AcH/H_2 in the reaction products is 87% at 290° and 80% at 320° while the percentage of EtOH decompd. increases from 17.8 to 48.4%. The time factor has no appreciable effect on the AcH/H_2 ratio but affects the percentage of decompd. EtOH. Presence of H_2O increases the yield of AcOH. The use of mixed catalysts was investigated. V. KALICHEVSKY

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PODUROVSKAYA, O.M.; YEFIMOVA, N.I.

Reaction of cyclohexanone oxime with potassium bromate. Zav.lab. 29 no.4:420 '63. (MIRA 16:5)

1. Gosudarstvennyy institut azotnoy promyshlennosti.
(Cyclohexanone) (Potassium bromate)

PODUROVSKAYA, O. M.

PA 8T5

USSR/Chemistry - Butadiene
Chemistry - Ethyl alcohol

Feb 1947

"On the Mechanism of the Catalytic Synthesis of Butadiene from Ethyl Alcohol," M. Ya. Kagan, G. D. Lyubarsky, O. M. Podurovskaya, 8 pp

"Izv Ak Nauk Khim" No 2

Preparation of butadiene from crotonaldehyde in the presence of the catalysts which make possible the hydrogenation of the latter through conjugate dehydrogenation of alcohol.

8T5

PODUROVSKAYA, O. M.

USSR/:hysics Adsorption Aug 48

"Adsorption of Vapor Mixtures on Porous Adsorbents," G. F. Lesokhina, O. M. Podurovskaya, K. A. Gol'bert, Physicochem Inst imeni L. Ya. Karpov, Moscow, 6½ pp

"Zhur Fiz Khim" Vol XXII, No 8

Deduces that there is a very close relationship between adsorption from solutions and adsorption from vapor mixtures of the same balance as these solutions. Approximate predictions can be made for adsorption of vapor mixtures on carbon, given adsorption from solutions and relatively high pressure. Submitted 8 Dec 47.

PA 55/49T80

PROTASHIK, Vasiliy Anufriyevich; ZOZULYA, Nikolay Vasil'yevich, inzh.; ISAYEV, Yuriy Borisovich; UDAL'TSOV, A.N., glavnyy red.; KONAREV, M.I., kand.khim.nauk; red.; PODUROVSKAYA, O.M., kand.khim.nauk, red.; TOLCHINSKIY, Ye.M., inzh., red.

[Equipment for gauging the surface of hard objects by adsorption of radioactive carbonic acid. Device for measuring the thickness of liquid films in a vacuum. A receiver-condenser] Ustanovka dlia izmereniia poverkhnosti tverdykh veshchestv po adsorbtsii radioaktivnoi uglekisloty. Pribor dlia izmereniia tolshchiny zhidkikh plenok v usloviiakh vakuuma. Priemnik-kondensator. Moskva, 1956. 12 p. (Pribory i stendy. Tema 8, no. P-56-439) (MIRA 11:3)

1. Moscow. Institut tekhniko-ekonomicheskoy informatsii.
(Radioactive substances--Industrial applications)
(Surfaces (Technology)) (Thickness measurement)

PODUROVSKAYA, O.M.; PETRAKOVICH, V. Ye.

Titration of acids and bases by metal oxide electrodes. Zav. lab.27 no.2:157-159 '61. (MIRA 14:3)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.
(Acids) (Bases (Chemistry))(Electrodes, Oxide)

PODUROVSKAYA, O.M.; KUTILINA, R.A.; YEFIMOVA, N.I.

Bromatometric determination of cyclohexanone oxime. Zav. lab. 27 no. 4:403-405 '61. (MIRA 14:4)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.
(Cyclohexanone) (Potassium bromate)

PODUROVSKIY, I.M., inzh.

New methods used in concreting the Krasnoyarsk Hydroelectric Power Station. Mekh. stroi. 17 no.11:28 N '60. (MIRA 13:11)
(Krasnoyarsk Hydroelectric Power Station)
(Concrete--Transporation)

PODUROVSKIY, I.M.; TOROPOV, L.N., red.; LARIONOV, G.Ye., tekhn. red.

[Overhead cable conveying at hydroelectric construction projects] Kanatnyi podvesnoi transport na gidroenergeticheskom stroitel'stve. Moskva, Gos. energ. izd-vo, 1961. 93 p. (MIRA 15:3)

(Cableways)

MIRONOV, S.A., doktor tekhn. nauk, prof.; MALININA, L.A., kand. tekhn. nauk; FEDOROV, V.A., inzh.; KAYSER, L.A., inzh.; KRONGAUZ, S.D., kand. tekhn. nauk; PANFILOVA, L.I., kand. tekhn. nauk; SEMENOV, L.A., doktor tekhn. nauk, prof.; PODUROVSKIY, N.I., kand. tekhn. nauk; VINNITSKIY, A.M., kand. tekhn. nauk; KLIMOVA, G.D., red. izd-va; SHEVCHENKO, T.N., tekhn. red.

[Instructions on curing concrete and reinforced concrete products at plants and building sites]Instruktsiia po proparivaniiu betonnykh i zhelezobetonnykh izdelii na zavodakh i poligonakh. Moskva, Gosstroiizdat, 1962. 33 p. (MIRA 15:12)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Mironov).
(Precast concrete--Curing) (Autoclaves)

Podurovskiy, N.I.

SEMENOV, N.A., doktor tekhn. nauk, prof.; PODUROVSKIY, N.I., inzh.

Heat-curing of concrete using clean saturated steam. Bet. i zhel.-bet. no.12:480-486 D '57. (MIRA 11:1)
(Concrete) (Autoclaves)

KONOPLENKO, A.I., kand.tekhn.nauk; PODUROVSKIY, N.I., inzh.; ROMODANOV, A.N., inzh.

Determining the relation between small and large aggregate particles in selecting concrete mixes. Bet. i zhel.-bet. no.6:206-208 Je '58. (MIRA 11:6)

(Concrete)

PODUROVSKIY, N.I., assistent; SAVIN, Ye.S., assistent

Evaluating the quality of steam curing of concrete. Trudy RISI no.15:63-72 '58. (MIRA 13:6)
(Concrete--Curing)

PODUROVSKIY, N. I., CAND TECH SCI, "STEAMING of cement CONCRETES IN A MEDIUM OF PURE SATURATED STEAM." MOSCOW, 1961. (MIN OF HIGHER AND SEC SPEC ED RSFSR. MOSCOW ORDER OF LABOR RED BANNER ENGINEERING AND CONSTRUCTION INST IMENI V. V. KUYBYSHEV). (KL-DV, 11-61, 222).

SEMENOV, L.A., doktor tekhn. nauk, prof.; PODUROVSKIY, N.I., inzh.; CHERKINSKAYA, L.R., red. izd-va; MIKHEYEVA, A.A., tekhn. red.

[Pressureless autoclave] Beznapornaia proparochnaia kamera. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 105 p. (MIRA 14:10)

(Autoclaves) (Precast concrete)

LAVROVA, I., assistent; PODURTSEVA. Ye., khirurg

Away with accidents in everyday life. Okhr. truda i sots. strakh. 4 no.5:39-40 My '61. (MIRA 14:5)

1. Kafedra organizatsii zdravookhraneniya 1-go Moskovskogo meditsinskogo instituta (for Lavrova). 2. Mediko-sanitarnaya chast' zavoda "Kauchuk" (for Podurtseva).
(Moscow--Safety education)

POBUSHKIN, A.

26174 Iz opyta rukovodstva kyl'turno-massovoy rabotoy (TSK PROF. soyuza rabochikh elektrostantsiy) Prof. soyuzy, 1949, 8, s. 16-20

SO: LETOPIS' NO. 35, 1949

PODUSHKIN, A., zaveduyushchiy.

Augment the role of trade-unions in the development of Soviet trade. Sov.profsoiuzy 1 no.3:55-60 N '53. (MLRA 6:12)

1. Zhilishchno-bytovyy otdel Vsesoyuznogo tsentral'nogo soveta profes-sional'nykh soyuzov.
(Trade-unions) (Retail trade)

PODUSHKIN A.S.

PERVUKHIN, M.G.; LOGINOV, F.G.; ZHIMERIN, D.G.; PAVLENKO, A.S.; KULEV, I.A.; DONCHENKO, V.I.; DROBYSHEV, A.I.; DMITRIYEV, I.I.; YERMAKOV, V.S.; SOSNIN, L.A.; PODUSHKIN, A.S.; SMIRNOV, M.S.; TARASOV, N.Ya.; NIKOL'SKIY, G.P.; KRYLOV, N.A.; KOUTEV, G.I.; ACHKASOV, D.I.; VESELOV, N.D.; CHIZHOV, D.G.; UGORETS, I.I.; NIKIFOROV, F.N.; PLATONOV, N.A.

Vladimir Nikolaevich Sergeev; obituary. Elek. sta. 27 no.3:63 Mr '56. (MIRA 9:8)

(Sergeev, Vladimir Nikolaevich, 1903-1956)

L 38910-66 EWT(m)/EWP(t)/ETI IJP(c) JD/WB

ACC NR: AP6019563 SOURCE CODE: UR/0080/66/039/006/1249/1256

AUTHOR: Gopiyenko, V. G.; Gopiyenko, G. N.; Timofeyev, V. V.; Podushkin, D. I.

ORG: none

TITLE: Behavior of steels in melts containing titanium chlorides

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 6, 1966, 1249-1256

TOPIC TAGS: titanium, chloride manganese, chromium, vanadium, molybdenum, nickel, corrosion, steel / steel-3, 1Kh18N9T steel, 2Kh13 steel

ABSTRACT: The article reports on a study of the behavior of certain steels (steel-3, 1Kh18N9T, 2Kh13) and metals (Mn, Cr, V, Mo, Ni) in melts containing $TiCl_2$, $TiCl_3$, and $TiCl_4$ in various proportions, carried out mainly for the purpose of obtaining melts with lower titanium chlorides, and also to determine the conditions of electrowinning and refining of titanium in melts. In melts containing metallic Ti and $TiCl_2$, virtually no corrosion of steel-3 is observed; on the contrary, the formation of titanium coatings on the steel takes place. Alloy steels (1Kh18N9T and 2Kh13) display a greater corrosion than does steel-3, owing to a selective dissolution of chromium out of the steel. In melts containing $TiCl_3$, all the steels corrode and contaminate the melt with iron chlorides; a lesser corrosion is exhibited by steel-3 in this case as well. The most pronounced corrosion occurs on all the steels under

Card 1/2 UDC: 546.82'131-143

PODUSHKO, S.V., inzhener-podpolkovnik; ROYENKO, P.V., inzhener-podpolkovnik

Improve the system for keeping track of failures and defects in equipment. Vest.protivovozd.obor. no.3:39-40 Mr '61. (MIRA 14:7)
(Airplanes--Maintenance and repair)

PODUSHKO, T.A.; ODINOKOVA, V.A.

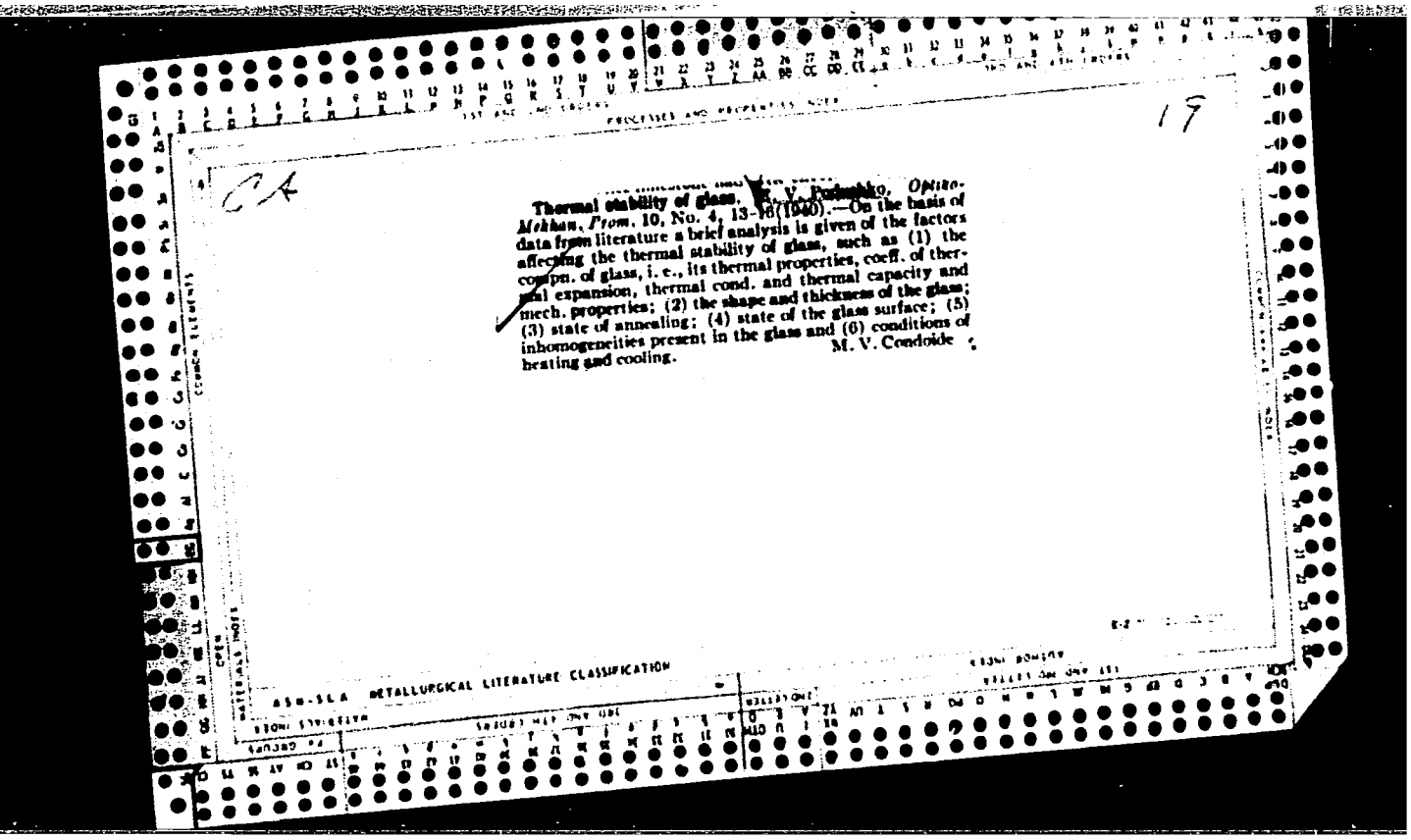
Unusual course of acute leukemia. Probl. gemat. i perel. krovi no.10:56-58 '62. (MIRA 17:12)

1. Iz 1-y terapevticheskoy kliniki (zav. - doktor med. nauk M.G. Malkina) i patomorfologicheskogo otdela (zav. A.A. Naumov) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F. Vladimirskogo.

PODUSHKO, T. A.

"Fever Reactions in Cases of Acute Atrophy of the Liver," Klin. Med., 27, No.6, 1949

1st Therapeutic Clinic, Moscow Oblast' Sci.Res. Clinical Inst.



CA

19

Thermal stability of glass. [illegible] Onisko, *Onisko-Mekhan. Prom.* 10, No. 4, 13-16 (1940).—On the basis of data from literature a brief analysis is given of the factors affecting the thermal stability of glass, such as (1) the compn. of glass, i. e., its thermal properties, coeff. of thermal expansion, thermal cond. and thermal capacity and mech. properties; (2) the shape and thickness of the glass; (3) state of annealing; (4) state of the glass surface; (5) inhomogeneities present in the glass and (6) conditions of heating and cooling.
M. V. Condoide

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

ACCESSION NR: AT4019293 S/0000/63/003/001/0090/0099

AUTHOR: Florinskaya, V. A.; Podushko, Ye. V.; Gonek, T. N.; Chernova, E. F.

TITLE: Infrared spectra of glassy and crystallized silicates of the system lithium oxide-aluminum oxide-silicon dioxide ± TiO_2 and their relationship to the structure

SOURCE: Simpozium po stekloobraznomu sostoyaniyu. Leningrad, 1962. Stekloobraznoye sostoyaniye, vy*p. 1: Katalizirovannaya kristallizatsiya stekla (Vitreous state, no. 1: Catalyzing crystallization of glass). Trudy* simpoziuma, v. 3, no. 1. Moscow, Izd-vo AN SSSR, 1963, 90-99, insert between p. 90 and 91.

TOPIC TAGS: glass, silicate, crystallization, glass structure, infrared spectrum, infrared spectroscopy, lithium oxide, aluminum oxide, titanium dioxide, spodumene

ABSTRACT: Infrared spectra of glass 13 with TiO_2 were determined over a range of 7-14 microns, along with the spectra of several natural minerals. The effects of variations in thermal treatment on the spectral properties and structure were investigated. The results show that transparent crystalline glass containing titanium with a composition close to spodumene has essentially the same crystal structure as found in pure crystallized spodumene glass. These crystals are formed below 800C. Loss of transparency in crystalline glass of the same or very similar composition is caused by the different

Card 1/2

ACCESSION NR: AT4019293

appearance of crystalline phases and by the larger dimensions of the crystals which are formed. The temperature conditions during the crystallization of glass and the addition of oxides can affect the composition of the crystalline phases. Glass crystallization is preceded by a period of latent structurization. Orig. art. has: 8 figures.

ASSOCIATION: None

SUBMITTED: 17May63 DATE ACQ: 21Nov63 ENCL: 00

SUB CODE: MT, OP NO REF SOV: 000 OTHER: 000

2/2

Card

ACCESSION NR: AT4019295 S/0000/63/003/001/0101/0104

AUTHOR: Kondrat'yev, Yu. N.; Podushko, Ye. V.
TITLE: A study of catalyzed crystallization by changes in absorption.
SOURCE: Simpozium po stekloobraznomu sostoyaniyu. Leningrad, 1962. Stekloobraznoye sostoyaniye, vy*p. 1: Kataliziirovannaya crystallizatsiya stekla (Vitreous state, no.1: Catalyzing crystallization of glass.) Trudy* simpoziuma, v.3, no.1. Moscow, Izd-vo AN SSSR, 1963. 101-104.

TOPIC TAGS: catalyzed crystallization, silicate glass, glass, absorption spectrum, optical density, glass crystallization

ABSTRACT: Glass of the system Li_2O-Al_2O_3-SiO_2 with TiO_2 admixtures, with varying amounts of Li_2O but in the region close to spodumene, was used as test samples. Two temperature ranges were investigated, one in which no glass crystallization occurs and the other in which crystallization and a further rearrangement of the structure take place. The change in optical density with time and temperature was plotted, and a general equation was given for these curves:

$$\ln \frac{D_p^{\infty} - D_0}{D_p - D_i} = K_1 t. \quad (1)$$

Card 1/3

ACCESSION NR: AT4019295

in which K1 is the constant rate of change in optical density at a given temperature. The activation energy for the Li^{1+} displacement, calculated by electroconductivity data, is 16-19 kcal/mol., but the observed activation energy was 2.5 times as large. The main stages of the conversion to crystallized glass during heating are indicated, and the changes in optical density of glass due to heating are explained. The crystallization process is said to consist of two stages: the diffusion of light ions and the diffusion of elements of the lattice, terminating in the formation of more or less ordered regions; the precrystallization period is the period of covalent diffusion. The method proposed for the study of the processes of precrystallization and crystallization is convenient because absorption of light by glass is a property which is sensitive to structural changes. The materials for the synthesis of glass contain colored indicators (in our case iron). This makes it possible to investigate these processes and connect them to the formation of centers of crystallization and a substance intermediate between glass and the final crystalline structure. Orig. art. has: 5 figures and 4 formulas.

ASSOCIATION : None

Card 2/3

ACCESSION NR: AT4019295

SUBMITTED: 17May63 DATE ACQ: 21Nov63 ENCL: 00

SUB CODE: MT NR REF SOV: 006 OTHER: 003

Card 3/3

ACCESSION NR: AT4019288 S/0000/63/003/001/0074/0081

AUTHOR: Podushko, Ye. V.; Kozlova, A. B.

TITLE: Mechanism of the catalyzed crystallization of glass of the lithium oxide-aluminum oxide-silicon dioxide system with titanium dioxide

SOURCE: Simpozium po stekloobraznomu sostoyaniyu. Leningrad, 1962. Stekloobraznoye sostoyaniye, vy*p. 1: Katalizirovannaya kristallizatsiya stekla (Vitreous state, no. 1: Catalyzing crystallization of glass). Trudy* simpoziuma, v. 3, no. 1. Moscow, Izd-vo AN SSSR, 1963, 74-81

TOPIC TAGS: glass, glass crystallization, catalyzed crystallization, titanium dioxide, lithium glass

ABSTRACT: Glass of the system Li_2O-Al_2O_3-SiO_2 containing titanium dioxide as a catalyst (2.0-11.0% by weight) and with a composition close to that of spodumene was investigated, and the two main stages in catalyzed crystallization were studied. In the first stage, the action of the catalyst appears and the conditions for the subsequent nucleation are created, while the second stage, nucleation and crystal growth proceed. Defects due to the catalyst are described. The effect of the amount of catalyst at different quenching temperatures

Card 1/2

BR

ACCESSION NR: AT4019311 S/0000/63/003/001/0164/0166

AUTHOR: Kalinin, M. I.; Podushko, Ye. V.

TITLE: Crystallized glasses based on cordierite

SOURCE: Simpozium po stekloobraznomu sostoyaniyu. Leningrad, 1962. Stekloobraznoye sostoyaniye, vy*p. 1: Katalizirovannaya kristallizatsiya stekla (Vitreous state, no. 1: Catalyzing crystallization of glass). Trudy* simpoziuma, v. 3, no. 1, Moscow. Izd-vo AN SSSR, 1963, 164-166

TOPIC TAGS: glass, glass crystallization, cordierite, titanium dioxide

ABSTRACT: The catalyzed crystallization of glasses of the system $MgO-Al_2O_3-SiO_2$, either having the composition of cordierite or containing at least 70% of this compound, was investigated using 8-20% TiO_2 as the catalyst. The effect of catalyst content and of preliminary heat treatment on the subsequent course of crystallization was determined, crystallization being carried out by the polythermal method at 700-1200C for 24 hours. Studies of the thermal effect and of the coefficient of linear expansion in relation to the temperature of crystallization showed that preliminary heat treatment had no effect in the presence of large amounts of catalyst, but that such treatment was required with small amounts of

Card 1/2

ACCESSION NR: AT4019311

catalysts to provide the optimal number of centers of crystallization. Thus, the curves were quite similar for samples with large amounts of catalyst and pre-heated samples with small amounts of catalyst (e.g. the presence of three exo-thermal maxima), while samples containing small amounts of catalyst and not pre-heated showed a strikingly different curve (one endothermal and two exothermal effects). Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 17May63	DATE ACQ: 21Nov63	ENCL: 00
SUB CODE: MT	NO REF SOV: 000	OTHER: 001

Card 2/2

CHERNEVA, E.F.; FLORINSKAYA, V.A.; PODUSHKO, Ye.V.

Infrared reflection spectra of the crystallization products of glasses of the Li_2O- SiO_2 system in the 7,7 - 14 μ region. Zhur. fiz. khim. 37 no.11:2556-2560 N'63. (MIRA 17:2)

ALEKSEYEV, A.G.; VERTSNER, V.N.; KONDRAT'YEV, Yu.N.; PODUSHKO, Ye.V.; TIKHOMIROV, G.P.

Catalyzed crystallization of glass. Dokl. AN SSSR 154 no.1: 178-180 Ja'64. (MIRA 17:2)

1. Predstavleno akademikom A.A. Lebedevym.

ACCESSION NR: AP4010759 S/0020/64/154/001/0178/0180

AUTHORS: Alekseyev, A. G.; Vertsner, V. N.; Kondrat'yev, Yu. N.; Podushko, Ye. V.; Tikhomirov, G. P.

TITLE: Investigation of catalyzed crystallization of glass

SOURCE: AN SSSR. Doklady*, v. 154, no. 1, 1964, 178-180

TOPIC TAGS: glass crystallization, catalyzed crystallization, glass opacity, spodumene, glass thermal treatment, Li_2O-Al_2O_3-SiO_2 Glass, TiO_2 catalyst

ABSTRACT: Glasses of the systems Li_2O-Al_2O_3-SiO_2 (similar in composition to that of spodumene) with 5% addition of TiO_2 as a catalyst were studied. Structural analysis was performed by electron- and X-ray diffraction. In addition, changes in light absorption were measured. Specimens were heat treated in air for 25 hrs in the temperature range between 600 and 1000°. There was no noticeable structural change in glass up to 625°. In the range from 625 to 700°, small crystals in some parts of the specimens appear. Above 700°, small-crystalline phase in the whole volume

Card 1/2

ACCESSION NR: AP4010759

is formed. The crystals remain small up to 830°. Above this temperature large size crystals are formed, and the glass becomes opaque. Orig. art. has: 3 Figures.

ASSOCIATION: None

SUBMITTED: 06Jun63 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: CH NR REF SOV: 001 OTHER: 002

Card 2/2

ALEKSEYEV, A. G.; VERTSNER, V. N.; ZHUKOVSKAYA, O. V.: PODUSHKO, Ye. V.; TIKHOMIROV, G.P.

"The structure of some glasses of LiO_2-Al_2O_3-SiO_2-TiO_2 system and its variation in thermal treatment over the wide temperature range."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad, 16-21 Mar 64.

AUTHORS: Vargin, V.V., Podushko, Yu.V. 72-58-6-6/19

TITLE: The Melting of Glass in a High-Frequency Electric Field (Varka stekla v elektricheskom pole vysokoy chastoty)

PERIODICAL: Steklo i Keramika, 1958, [illegible] Nr 6, pp. 16-19 (USSR)

ABSTRACT: The melting of glass by means of a high-frequency electric current can be carried out in crucibles of any shape; the glass mass does not come into contact with the electrodes, which improves the quality of production and simplifies the construction of furnaces. There are two methods of using high frequencies for the purpose of melting glass: the method of the electric field and that of the magnetic field. For the method of the electric field a frequency of 20-25 kc will be sufficient, and melting can be carried out at room temperature without any preheating. For the method of the magnetic field additional furnaces with an additional equipment for preheating the layer is necessary, which renders this method less valuable. The idea of melting glass by the method of the electric field was first developed in the USSR by A.V.Makarov, who, in 1941, succeeded in obtaining glass by means of a high-frequency system of 10 kW and 75 kc frequency in a crucible having a cubic capacity of 100 cm^3. Two apparatus of this type, UVCh-80 and

Card 1/2

The Melting of Glass in a High-Frequency Electric Field 72-58-6-6/19

UVCh-200, are at present in operation in the USSR; their power output is 80 and 200 kW respectively. Fig. 1 shows the apparatus UVCh-80, which is also described. A double quartz crucible with interspace, filled up with crushed fire clay was found to be the most suited. Fig. 2 shows the cooling of the plates by means of a spiral tube which is soldered on. Control of the smelting process can be carried out according to efficiency and temperature. In the high-frequency systems a number of multicolored as well as of optical types of glass, and of such as are particularly difficult to smelt was smelted, the temperature attained amounting to up to 1800°. By the smelting method of the electric field it is possible to obtain glass with a very low degree of light absorption. In the case of smelting carried out in an electric field the crucible is less liable to become corroded than in a reverbatory furnace. The entire process of glass smelting takes place in an atmosphere of oxidation, which fact exercises a favorable effect upon light absorption. The degree of efficiency of these plants is considerably higher than that of reverbatory furnaces, and the quality of glass is partly better. These systems can be used with good success both in production and in experiments. There are 2 figures, and 1 reference, 0 of which is Soviet.

1. Glass--Melting 2. High frequency currents--Thermal effects

Card 2/2

Fedushka, Ye. V.

15(2)
AUTHOR: Non Given SOV/72-59-5-1/23

TITLE: Glass Science at the VIII Mendeleyev Congress
(Nauka o stekle na VIII Mendeleyevskom s"yezde)

PERIODICAL: Steklo i keramika, 1959, Nr 5, pp 1-4 (USSR)

ABSTRACT: In the beginning a proclamation of the TsK KPSS to the personnel of the building material industries for a qualitative and quantitative increase of production is mentioned. The Congress took place in Moscow in the second half of March of the current year and was devoted to the 125th anniversary of the great scholar's birthday. Outstanding chemists of the Soviet Union and the People's Democracies attended the Congress. The principal problems of the development of chemistry were discussed at the plenary meetings and the meetings of the 10 Congress sections. Professor I. I. Kitaygorodskiy opened the meetings of the sub-section for glass and gave a survey of the stages of development of Soviet glass production as well as of a number of promising tasks in the field of glass technology. Moreover, the following lectures were held: Doctor Korosi (People's Republic of Hungary) investigated the structure of the top-layers of glass;

Card 1/4

A. A. Avgustinik (LTI imeni Lensoveta) discussed the formation of a finely disperse crystalline phase from the glass-like phase; V. V. Vargin and G. O. Karapetyan (GOI) reported on absorption spectra, luminescence, and photochemical properties of cerium-glass types; A. G. Finger (GOI) reported on the quantitative reciprocal relations between ordered and disordered glass phases; Ye. A. Porai-Koshits, Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry of the AS USSR) discussed the reasons for the disagreement on the problem of the structure of glass-like substances; Professor O. K. Botvinkin, K. I. Ananich, and M. L. Klimova, Institut stekla (Glass Institute) reported on the Investigation of the glass structure by the Method of Thermal Analysis and Optical Polarisation; Ye. V. Fedushko (GOI) discussed the new method of electric glass melting and the melting of silicates by means of high-frequency current; Yu. G. Shteynberg reported on strontium-magnesium glazes without lead and boron for faience and majolica which have been developed in the Gosudarstvennyy nauchno-issledovatel'skiy keramicheskiy institut (State Scientific Research Institute of Ceramics); L. S. Yastrebova, and V. S. Molchanov (GOI) discussed the role played by the

Card 2/4

surface protection film in the destruction of silicate glasses; G. I. Vernberg (GOI) discussed the coloring characteristics and the technology of phosphate glasses; O. V. Mauria (LTI) reported on the mobility of sodium ions in glass types of the system Na_2O-RO-RIO_2; Z. A. Rosova (NII Stroykeramika) discussed the process of subduing the glazes by lead oxide and zirconium; I. G. Malinichenko, Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute) reported on silicate formation and sintering processes in the briquetted glass layer; K. E. Yagnatinskiy investigated various types of glass; M. L. Shagal' (Glass Institute) reported on the determination of impurities in silica by spectroscopic analysis; O. P. Mchedlova, and Ye. M. Orlova (Glass Institute) reported on types of electrode glass which has been derived by them. Th. V. Rogoshin (Glass Institute) discussed the kinetics of the formation of crystallisation centers in photo-sensitive types of glass; Z. M. Syritskaya (Glass Institute) discussed the results of the investigation of the tendency of phosphatic systems towards glass formation; L. A. Grechanik, M. V. Fairovykh, and V. G. Karpachenko (NIIES) reported on the investigation of types of semiconducting oxide glass on the basis of V_2O_5 ; B. Ye. Solopin, L. A. Grechanik, I. V. Shmakova, and Ye. A. Paynberg (NIIES) discussed the production of conductive films on types of glass which contain components easily to be regenerated.

L 11869-66 EWT(m)/EWP(e)/EWP(b) GS/WH

ACC NR: AT6000503 SOURCE CODE: UR/0000/65/000/000/0351/0356

AUTHOR: Alekseyev, A. G.; Vertsner, V. N.; Zhukovskaya, O. V.; Podushko, Ye. V.; Tikhomirov, G. P.

ORG: None

TITLE: The changes in the properties and structure of Li_2O-Al_2O_3-SiO_2-TiO_2 glasses during heat treatment in a wide range of temperatures

SOURCE: Vsesoyuznoye soveshchaniye po stekloobraznomu sostoyaniyu. 4th, Leningrad, 1964. Stekloobraznoye sostoyaniye (Vitreous state); trudy soveshchaniya, Leningrad, Izd-vo Nauka, 1965, 351-356

TOPIC TAGS: lithium glass, silicate glass, aluminum silicate, solid solution, catalized crystallization, crystal

ABSTRACT: The properties and structure of lithia-aluminosilica glasses catalyzed by TiO_2 and treated within a wide range of temperatures have been investigated. Special attention was paid to glasses the composition of which was close to spodumene (SiO_2 - 60.5; Al_2O_3 - 28.0; Li_2O - 6.5; TiO_2 - 5.0 weight %). The results cover the dependence of the index of refraction and glass density on the duration of treatment, the comparative x-ray and infrared reflection spectra for glasses treated at different temperatures, and the dependence of the index of refraction and glass density on treatment temperature. Curves of the differential thermal analysis are also given. The results show that at temperatures of 700 to 800C the resulting crystals

Card 1/2

L 11869-66

ACC NR: AT6000503

belong basically to the eucryptite-like solid solution. By their chemical composition these crystals are close to spodumene. At 890C, the basic crystalline phase becomes apparently identical to the β modification of spodumene, and the solid solution is now of the spodumene type. Orig. art. has: 6 figures.

SUB CODE: 11, 20 / SUBM DATE: 22May65 / OTH REF: 002

jw

Card 2/2

L 42[illegible] EWT(l) IJP(c) JT

ACC NR: AP6018727 SOURCE CODE: UR/0057/66/036/006/1027/1033

AUTHOR: Golant, V. Ye.; D'yachenko, V.V.; Novik, K.M.; Podushnikova, K. A.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Investigation of electron cyclotron heating of plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1027-1033

TOPIC TAGS: plasma heating, cyclotron resonance, hydrogen plasma, magnetic mirror, plasma electron temperature

ABSTRACT: The authors' experiments on heating plasmas in a magnetic mirror system by supplying energy at the electron cyclotron resonance differed from other such experiments in that separate oscillators were employed to produce the plasmas and to heat them. The plasmas were produced in 9 cm diameter, 18.5 or 30 cm long copper resonators containing hydrogen at from 5×10^{-6} to 10^{-3} mm Hg. The shorter resonator communicated via a 3.5 cm diameter hole in an end wall with a glass tube. The resonator in use was mounted between magnetic mirrors (mirror ratio, 1.8) 30 cm apart. When the shorter resonator was employed, the glass tube was in the region of one of the magnetic mirrors; in all cases the copper resonator was between the mirrors. Approximately 100 W of rf power at 9.3-9.5 kMHz was continuously supplied to the

Card 1/3 UDC: 533.9

resonator to ionize the gas and 4.12 to 30 microsec pulses of rf power at the same frequency with pulse powers up to 100 kW were employed to heat the plasma. The visible radiation from the plasma was recorded with a photomultiplier, the x radiation from the plasma was recorded with a 0.1 x 3 or a 3 x 3 cm NaI scintillator shielded with 1 cm of lead, and the plasma was probed with 10, 3.3-4, and 0.8 cm wavelength microwave beams. The continuous 100 W excitation at 9.3-9.5 kMHz produced plasmas with electron densities of the order of 10^{12} cm^{-3} when both magnetic mirrors were operating, and part of the plasma produced in the shorter copper resonator appeared in the portion of the glass side tube that was between the magnetic mirrors. The uhf pulses were strongly absorbed by the plasma; under favorable conditions 30% of the pulse power was absorbed. The maximum energy thus injected into the plasma was 0.2 J. X radiation was observed when the plasma was excited by the powerful uhf pulses. From the absorption curve of the x radiation it was concluded that electrons with energies up to 100 keV were present with a concentration (estimated from the total absorbed energy and the volume of the plasma) of the order of 10^{10} cm^{-3}. The x-ray pulse was delayed by some 4-5 microsec with respect to the exciting uhf pulse, and when the uhf pulse duration was less than 5 microsec the x rays did not appear. In view of the fact that plasmas produced during the experiments within the shorter metallic resonator appeared outside the resonator in the glass tube, it is suggested that it may be possible simultaneously to heat both the ions and the electrons of the same plasma

L 26971-65 EWT(1)/EPA(sp)-2/EWT(m)/T/EEC(t)/EPA(w)-2/EWA(m)-2 Pz-6/Pc-4/
Pab-10/Pi-4 IJP(c) AT

ACCESSION NR: AP5003260 /0057/65/035/001/0172/0174

AUTHOR: Galaktionov, B.V./ Larionov, M.M./ Podushnikova, K.A.

64 42 B

TITLE: On the anisotropy of the electron energy distribution in the "alpha" installation 19

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.1, 1965, 172-174

TOPIC TAGS: plasma, plasma energy distribution, electron energy

ABSTRACT: The electron energy distribution in the plasma 21 of the "alpha" installation was measured at the instant of maximum discharge current with a triple-grid probe. The probe was oriented so that its electrodes were perpendicular to the magnetic field at the instant of maximum current; by rotating the probe through 180° it was possible to determine separately the energy distribution of the electrons that were accelerated or retarded, respectively, by the circuital electric field. Although no anisotropy of the ion energy distribution had been detected in previous measurements, the electron energy distribution was found to be indeed anisotropic. The observed electron energy distribution could be represented by a displaced Maxwellian curve in which the energy of the directed motion was from 3 to 15% of the

Card 1/2

L 26971-65
ACCESSION NR: AP5003260

3

thermal energy. These results are similar to those obtained by A.Gibson and D.W. Mason (Proc.Phys.Soc.79,326,1962) for the "zeta" installation. The interpretation of the results is discussed very briefly, and it is suggested that reflection from field fluctuations prevents any considerable number of electrons from being continuously accelerated, so that the effect of the longitudinal electric field is merely to render the electron velocity distribution slightly anisotropic. "We are grateful to B.P.Konstantinov, V.Ye.Golant and D.G.Bulyginskiy for the interest they have shown in the work and for much valuable advice." Orig.art.has: 2 figures.

ASSOCIATION: none

SUBMITTED: 12Aug64 ENCL: 00 SUB CODE: ME

NR REF SOV: 004 OTHER: 002

Card 2/2

PRAVDA, Z.; PODUSKA, K.; BLAHA, K.

Amino acids and peptides. Pt.43. Chem Cz Chem 29 no.11: 2626-2632 N '64.

1. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague.
2. Present address: Institute of Epidemiology and Microbiology, Prague (for Pravda).

PODUSKA, KAREL

6

Amino acids and peptides. XVI. Peptides of DL-α,β-diaminopropionic acid. Karel Poduška, Josef Rudinger, and František Sorm (Czech. Acad. Sci., Prague). *Chem. Listy* 49, 737–44; *Collection Czechoslav. Chem. Communs.* 20, 1174-82(1955)(in English); cf. *C.A.* 50, 1590e.—Prepns. of DL-α,β-*diaminopropionamide* (I), DL-α,β-*diaminopropionylglycine* (II), DL-α,β-*diaminopropionylglycinamide* (III), *Nα-glycyl-*DL-α,β-*diaminopropionic acid* (IV), *Nβ-glycyl-*DL-α,β-*diaminopropionic acid* (V), *bis-glycyl-*DL-α,β-*diaminopropionic acid* (VI), and of the derivs. are described. Heating 40 g. $BrCH_2CHBrCO_2H$ with 400 ml. aq. NH_4OH satd. at 0° 3–4 hrs. at 100° in an autoclave, distg. off the NH_3 *in vacuo* under N, dissolving the residue in a min. amt. of H_2O, and treating the soln. with activated C, and filtering gave 14.5–17.5 g. DL-$H_2NCH_2CH(NH_2)CO_2H$, decompg. 230–2°. *Nβ-carbobenzyloxy-*DL-α,β-*diaminopropionic acid*, decompg. 234–5°, yield 15%. *Nα-benzoyl-Nβ-carbobenzyloxy-*DL-α,β-*diaminopropionic acid* m. 150–1°. Treating 5.4 g. dicarbobenzoxy-DL-α,β-diaminopropionic acid (VII) in 60 ml. dry $CHCl_3$ at 0° with 3.8 g. PCl_5 until the PCl_5 dissolved, evapg. the mixt. *in vacuo* at 40°, and extg. the residue with petr. ether gave 3.54 g. DL-*4-(carbobenzyloxyaminomethyl)oxazolidine-2,5-dione* (VIII), decompg. 139–40° (from AcOEt-petr. ether). Shaking 1.61 g. VIII at 20° with 30 ml. abs. MeOH contg. 10 millimoles HCl, letting stand 12 hrs., distg. off the MeOH, and crystg. the residue from MeOH-Et_2O mixt. gave 1.60 g. of the *HCl salt* of *Me Nβ-carbobenzyloxy-*DL-α,β-*diaminopropionate*, m. 137–8°. In the same way was prepd. 85% *HCl salt* of *Et Nβ-carbobenzyloxy-*DL-α,β-*diaminopropionate* (IX), m. 143–4.5°. Treating 1.12 g. VII with 20 ml. *N* HCl in EtOH overnight gave 1.1 g. *Et dicarbobenzyloxy-*DL-α,β-*diaminopropionate*, m. 89–91° (from AcOEt-petr. ether); *amide*, by treatment with MeOH satd. with NH_3, in 81% yield, m. 172–3° (from 50% AcOH). Hydrolysis of the amide (0.73 g.) with 10 ml. 37% HBr in AcOH (20 min. at 20° and 20 min. at 40°) and dilu. with Et_2O gave after 1 hr. at 0° 0.51 g. *di-HBr salt* of I, decompg. 243°. The *Et ester* (IXa) of *di(carbobenzyloxy)-*DL-α,β-*diaminopropionylglycine* (X) was prepd. in 2 ways: Refluxing 1.07 g. VII in 10 ml. PhMe 2 hrs. with 0.72 g. $OCNCH_2CO_2Et$, distg. off the solvent *in vacuo*, triturating the residue with satd. soln. of $NaHCO_3$, and washing the crystals with H_2O, *N* HCl and H_2O gave 2.2 g. IXa, m. 141–1.5° (from 80% EtOH). Treating 3 g. VII in 20 ml. $CHCl_3$ at 5° with 0.93 g. 1-$EtC_5H_{10}N$ and 1.12 *sec*-BuO_2CCl, adding a cool (−5°) soln. of 0.87 g. $H_2NCH_2CO_2Et$ in 10 ml. $CHCl_3$, letting the mixt. stand 2 hrs. at −5° and 12 hrs. at room temp., evapg. the solvent, and treating the residue with $NaHCO_3$ gave 84% IXa. IXa (3.33 g.), 8 ml. *N* NaOH, 5 ml. MeOH, and 10 ml. dioxane shaken 1.5 hrs., acidified to Congo red with dil. HCl, and the cryst. residue (2.91 g.) repptd. from $NaHCO_3$ gave 1.6 g. X, m. 170–1°. X was treated with HBr in AcOH, the base liberated by means of an ion exchanger, and treated with picric acid to give *picrate* of II, m. 210° (from H_2O). Satg. 1.5 g. of the Et ester of X in 30 ml. MeOH with NH_3 at 0°, keeping the

KAREL POSDUŠKA

mixt. overnight, distg. off the MeOH, and repeating the procedure with the residue gave 1.18 g. of the *amide* of X, m. 178–9.5° (from aq. EtOH). Treatment of 0.8 g. of this compd. with HBr in AcOH, with Amberlite, and with picric acid gave 0.75 g. of the *dipicrate* of III, m. 190–1° (from aq. EtOH). IX (from 2.12 g. IX.HCl and NH_3 in $CHCl_3$) treated with 1.04 g. $PhCH_2O_2CNHCH_2CON_3$ gave *Et ester of Nᵝ-carbobenzyloxy-Nᵅ-carbobenzyloxyglycyl-DL-α,β-diaminopropionic acid* (XI) as a gel; the Me ester was prepd. similarly. Sapon. of the Et or Me ester of XI by keeping 1.5 hrs. with *N* alc. NaOH gave 1.58 g. free XI, m. 120–2°. Treatment of XI with HBr in AcOH, filtering the soln. through Amberlite, evapg. the soln. to 10 ml., and adding to 4 ml. 0.23 g. picric acid in 3 ml. EtOH pptd. 0.3 g. of the *picrate* of IV, decompg. 208° (from H_2O). Dissolving 24 g. of the HBr salt of $H_2NCH_2CH(NH_2)CO_2H$ in 130 ml. 2*N* NaOH, cooling the soln. to 0°, and treating during 35 min. with 35 g. tosylglycine chloride in Et_2O and with 300 ml. *N* NaOH, stirring the mixt. 35 min. at 0°, sepg. the aq. layer, extg. it twice with Et_2O, acidifying with HCl to Congo red, repptg. the sepd. crystals 3 times, and crystg. the product from dil. AcOH gave 7.1 g. *dihydrate* of *Nᵅ,Nᵝ-bis-(tosylglycyl)-DL-α,β-diaminopropionic acid* (XII), m. 80–2°. Adjusting the pH of the mother liquors to 7 and letting the soln. stand several hrs. at 0° gave 10.57 g., and by evapg. an addnl. 1.84 g. *Nᵝ-tosylglycyl-DL-α,β-diaminopropionic acid* (XIII), decompg. 202°. Heating 2.77 g. XIII, 2.6 g. PhOH, and 44 ml. 37% HBr in AcOH 2 hrs. at 70° in a pressure bottle, cooling the mixt., pouring it into 150 ml. Et_2O, allowing to stand 2 hrs. in the icebox, washing the crystals several times with Et_2O, dissolving them in H_2O, removing the Br⁻ ions with Amberlite in an acetate cycle, evapg. the filtrate *in vacuo*, and treating the residue with 30 ml. EtOH contg. 15 millimoles HCl pptd. an oil which crystd. on trituration at 50°. Dissolving the HCl salt in a min. amt. of H_2O, treating the soln. with 20 ml. EtOH contg. 5 millimoles HCl, and adding Et_2O pptd. 1.45 g. of the *HCl salt* of V, decompg. 210°. The same product was obtained from XIII in 48% yield by reduction with Na in NH_3. Heating 0.53 g. XII (dried *in vacuo* over P_2O_5), 0.6 g. PhOH, and 10 ml. 30% HBr in AcOH 4 hrs. at 65°, and working up the mixt. as described above yielded 87% of the amino acid and, after adding picric acid, 76% of the *picrate* of VI, m. 204–5° (decompn.) (from H_2O). Adding at 0° 1 g. tosylglycine chloride in Et_2O soln. to 0.91 g. HCl of the salt of *Et Nᵝ-carbobenzyl-oxydiaminopropionate* in 6 ml. *N* NaOH, shaking the mixt. 1.5 hrs. at 0°, sepg. the aq. layer, extg. it twice with Et_2O, and acidifying with HCl gave an oil which crystd. in the icebox. Repptn. and recrystn. gave 0.29 g. *Nᵝ-carbobenzyl-oxy-Nᵅ-tosyloxy-DL-α,β-diaminopropionic acid*, m. 161–3°. Shaking 0.95 g. XIII, 0.68 g. $PhCH_2O_2CCl$, and 10 ml. *N* NaOH 2 hrs. at 0°, extg. the soln. twice with Et_2O, and acidifying it with HCl gave an oil which crystd.; after repptn. and recrystn. from aq. EtOH, it m. 155 6° (yield 0.2 g.).

M. Hudlický

CZECHOSLOVAKIA

PODUSKA, K; RUDINGER, J

Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 7, July 1966, pp 2938-2954

"Amino acids and peptides. Part 62: Synthesis of a protected cyclodecapeptide containing α,γ-diaminobutyric acid."

CZECHOSLOVAKIA

PODUSKA, K

Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communications, No 7, July 1966, pp 2955-2972

"Amino acids and peptides. Part 63: Synthesis of a linear decapeptide sequence containing α,γ-diaminobutyric acid."

PODUSKA, KAREL

CZECHOSLOVAKIA/Organic Chemistry - Naturally Occuring Substances and Their Synthetic Analogs. G-3

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25322

Author : Poduska Karel, Rudinger Josef
Inst : -
Title : Amino Acids and Peptides. XXI. N-Substituted Pyrrolidones as Intermediates of the Synthesis of Peptides of Gamma-Amino-Butyric and Alpha-Gamma-Diamino-Butyric Acid.

Orig Pub : Chem. listy, 1957, 51, No 4, 616-624; Sb. chekhosl. khim. rabot, 1957, 22, No 4, 1283-1292

Abstract : Description of the syntheses of 1-tosyl-pyrrolidone-2 (I), 3-carbobenzoxy-amino- and 3-tosylamino-1-tosyl-pyrrolidone-2 (II and III) and of the use of these substances in the syntheses of peptides of gamma-amino-butyric and alpha-gamma-diamino-butyric acid. I was synthesized: a) by cyclisation with SOCl : 6.41 g gamma-tosyl-amino-butyric acid (TABA) and 20 ml $SOCl_2$ were boiled until all

Card 1/

31

a) 0.229 g I heated with 0.29 g EE of glycine in a stoppered flask for 30 minutes at 95°. Mixture dissolved in ethyl acetate (EA), product precipitated with petroleum

Card 2/

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25322

ether; yield 78%, MP 92-93° (from aqueous alcohol); b) the reaction mixture, same as in the case of (a), and 0.25 ml CH_3CN heated for 45 minutes on a boiling water bath. After evaporation of the solvent, diluted with 7 ml ether; yield 75%; does not cause MP depression with a sample of (a). Gamma-tosyl-amino-butyryl-glycine (V) was synthesized by shaking 3.85 g IV with 16 ml 2 N NaOH until dissolved and after 30 minutes the reaction mixture was made acid; yield of crude product 95%, MP 49-51° (from water). Preparation of gamma-amino-butyryl-glycine (VI):
a) 1.5 g V in 100 ml liquid NH_3 were reduced with 0.66 g Na, and treated with Amberlite IRC-50 (see RZhKhim, 1955, 31774, 31775); yield 70%, MP 220° (decomposes; using block MP apparatus);
b) 1.2 g V, 1 g phenol and 18 ml 37% solution of HBr in

CZECHOSLOVAKIA/Organic Chemistry - Naturally Occuring Substances and Their Synthetic Analogs.

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25322

N α -carbobenzoxy (CBZ)-N γ -tosyl-L, alpha,gamma-diamino-butyric acid (VIII) in 10 ml $CHCl_3$ were added at 0° 1.65 g EP and 0.72 g $ClCOOC_4H_7$-sec, and after 1 hour at 0° and an additional hour at about 20° there were added 40 ml ether, the product was washed on the filter with water, 1 N HCl, 5% solution of $NaHCO_3$ and with water; yield 86%, MP 184-185° (from alcohol).
Preparation of EE of N α -CBZ-N γ -tosyl-L-alpha,gamma-diamino-butyryl-glycine:
a) 0.194 g II, 0.155 g EE of glycine and 0.2 ml CH_3CN heated on boiling water bath for 30 minutes; after cooling diluted with 20 ml ether; yield 75%, MP 107-110°, no depression with sample (b);
b) 0.103 g EE of glycine, 0.284 g $(C_2H_5)_4P_2O_3$ and 0.7 ml $(C_2H_5)_2HPO_3$ heated to 100° (2 minutes), added 0.406 g VIII and heated at 100° for 30 minutes.

Card 5/

CZECHOSLOVAKIA/Organic Chemistry - Naturally Occuring Substances and Their Synthetic Analogs. G-3

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25322

After addition of 30 ml water crude product separates, yield 75%, MP 111-113° (from alcohol-ether).
Preparation of L-4-beta-CBZ-aminoethyl-oxazolidinone-2,5 (IX): into a suspension of 0.75 g N$^{\gamma}$ -CBZ-L-alpha,gamma-diamino-butyric acid in 18 ml dry dioxane; phosgene was passed at 90° until dissolution was effected (vibrostirrer) and then for an additional 10 minutes, the phosgene was removed, the residue was dissolved in EA and then ether was added followed by petroleum ether; yield 98%, MP around 60° (decomposes). By action of HCl (gas) in alcohol was prepared the hydrochloride of EE of N$^{\gamma}$ -CBZ-L-alpha,gamma-diamino-butyric acid; no depression with authentic sample. DL-N-carboxyanhydride synthesized analogously with the L-derivative of IX; yield 95%, MP 85-88° (decomposes).
Preparation of hydrochloride of 1-CBZ-L-3-amino-

Card 6/

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25322

prepared as follows:
a) from 1.08 g X the base was liberated with NH_3 in $CHCl_3$, the $CHCl_3$ was evaporated, 0.84 g CBZ-glycine, 1.2 g $(C_2H_5)_2P_2O_5$ and 2.5 ml $(C_2H_5)_4HPO_2$ were added, the mixture was heated at 100° for 30 minutes and poured in 20 ml water; the product was washed with water and a 5% solution of $NaHCO_3$; yield of crude product 88%, MP 132.5-134° (from 80% alcohol);
b) 0.26 g XI added to 0.21 g CBZ-glycine in 0.2 ml dry C_5H_5N, allowed to stand for 1 hour, then heated at 65° for 20 minutes; residue obtained on evaporation ground with 5% solution of $NaHCO_3$, crystalline product washed with water, 1 N HCl, and water, dissolved in EA, solution was filtered, dried and evaporated; yield 50%.
LL-3,8-bis-beta-CBZ-amino-ethyl-dihydroxy-piperazine-2,5 was prepared from X after isolation of base with NH_3 on

Card 9/

35

Card 10/11

CZECHOSLOVAKIA/Organic Chemistry - Naturally Occuring Substances and Their Synthetic Analogs. G-3

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25322

a) by aminolysis: 0.42 g XII, 0.3 ml EE of glycine and 0.5 ml CH_3CN heated 1.5 hours at 90-100° and diluted with 10 ml water; product washed with 5% solution $NaHCO_3$, water, dilute HCl and water; yield 65%, MP 169-170° (EA);
b) by azide synthesis: 0.46 g XIII in 10 ml of a mixture of 3 N HCl and CH_3COOH (1:1), at 0° added EA and then 0.7 ml of 10% solution of $NaNO_2$. Azide extracted with EA, extract washed with 5% solution $NaHCO_3$ (0°), dried with Na_2SO_4, and filtered into 0.11 g EE of glycine in EA, allowed to stand 3 days. Yield 53%, causes no depression with sample (a).
Communication XX see RZhKhim, 1957, 41281.

Card 11/11

36

PODUSKA, K.

Amino acids and peptides, XXI. N-substituted pyrrolidones as intermediates in the synthesis of peptides of γ-amino-butyric and α,γ-diaminobutyric acid.

p. 616 (CHEMICKE LISTY) Vol. 51 , no. 4, Apr. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their Synthetic Analogues. G-3.

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81802.

Author : Poduska K.
Inst :
Title : Amino Acids and Peptides. XXIII. The Preparation and Chromatographic Behavior of Some N-Methyl Derivatives of DL-Lysine.

Orig Pub: Chem. listy, 1958, 52, No 1, 153-155.

Abstract: To determine the chromatographic properties of methylated drivatives of lysine, the following derivatives of DL-lysine were synthesized: N^{α}-monomethyl (I), N^{ε}-monomethyl (II), and N^{α}-dimethyl (III). The synthesis was carried out according to the tech-

Card : 1/7

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their Synthetic Analogues. G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81802.

niques described in literature, but with some modification. N^{ε}-dimethyl-DL-lysine (IV) was obtained by the reductive methylation of N^{α}-benzoyl lysine and by hydrolysis of the prepared N^{α}-benzoyl-N^{ε}-dimethyl lysine. The intermediate products were obtained by the following method: N^{ε}-carbobenzoxy (CBZ)n-N^{α}-benzoyl-DL-lysine (see Greenstein J.P., J. Org. Chem., 1938, 2, 480), was synthesized in a 84% yield and m.p. 130°C. (corrected). N^{α}-benzoyl-DL-lysine monohydrate was obtained from CBZ-derivative by hydrogenation over Pd/C, yield 86%, m.p. 232-233°C. (corrected; decomposition; from water). N^{ε}-dimethyl-N^{α}-benzoyl-DL-lysine was obtained from 4.13 grams of N^{α}-benzoyl lysine using a minimum amount of water

Card : 2/7

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81802.

(at 20°C.) and 8.5 ml of 40% CH_2O and 2.5 grams of 15% Pd/C by hydrogenation (24 hours, 20°C). After changing the catalyst (1 g.), the hydrogenation was carried on for an additional 24 hours. The solution was evaporated to dryness, the residue was dissolved and was re-evaporated until free from formaldehyde odor; yield 76% (crude), m.p. 207-210°C. (corrected; from alcohol - acetone). IV was obtained from 0.8 grams of the previous product by boiling with 4.5 ml of 2 N barium hydroxide (5 hours), Ba^{2+} was removed with CO_2, the filtrate was acidified to Congo end point with sulfuric acid, after the barium sulfate was removed the filtrate was extracted twice with ether and poured on amberlite IRA-40 (OH-form). The

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81802

product was washed out with 5% ammonia and the eluate was evaporated to dryness; yield 50%, m.p. 243-245°C. (corrected; decomposition); monopicrate, m.p. 183-184°C. (corrected; decomposition; from aqueous alcohol). N^{α}-benzoyl-N^{ε}-dimethyl-DL-lysine from 5 grams of N^{ε}-benzoyl-DL-lysine, which was dissolved in water and 10 ml of 40% CH_2O, was hydrogenated similarly to IV, yield of the crude product (dihydrate) was 38%, m.p. 195-197°C., (corrected; from alcohol - acetone). An anhydrous product was obtained by drying over P_2O_5 for 24 hours at 120°C./0.5 mm., m.p. 197-198°C., (corrected). The other method: six grams of α-bromo-ε-benzamine capronic acid in 20 ml dimethylamine was kept in a closed vessel for 6 weeks; the solution was

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81802.

filtered with activated carbon and was evaporated to dryness. The residue was dissolved in water, and was re-evaporated, after the bromides were removed with silver oxide; yield 51%, m.p. 195-197°C., (from alcohol - acetone). III was obtained by the hydrolysis of the previous product in the same way as in the preparation of IV. The acetate solution was neutralized with HCl (acid) to litmus and was evaporated to dryness. The residue was dissolved in 90% alcohol, pyridine was added and the product was precipitated with ether. The yield was 70%, m.p. 139-140°C. (corrected). N-benzoyl-ε-methylamino capronic acid was synthesized by heating in a sealed flask to 75°C.

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81802.

for 2 hours and using 6 grams of N-tosyl-ε-methylamino capronic acid, 4 grams of phenol in 50 ml of 30% HBr in glacial acetic acid. The product after cooling was poured into 500 ml of dry ether, washed with dry ether and afterwards was acylated with C_6H_5COCl; yield 30%, m.p. 79-81°C. (corrected). N$^{\varepsilon}$-benzoyl-N$^{\varepsilon}$-methyl-DL-lysine was obtained from 1.4 grams of N-benzoyl-ε-methylamino capronic acid, 2.8 ml $SOCl_2$ and 10 milligrams of iodine, which was heated for one hour to 65-75°C and concentrated to dryness under vacuum. The residue was triturated with water and heated to 85-95°C. with 25 ml of 25% ammonia under pressure for 7.5 hours. The product was evaporated under vacuum and was washed with

CZECHOSLOVAKIA/Organic Chemistry Natural Products and Their Synthetic Analogues.

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81802. G-3

80% alcohol. The yield of unpurified product was 47%, m.p. 232-234° C. (corrected; decomposition). II was obtained from the previous compound by hydrolysis with barium hydroxide in the same way as in the case of IV; picrate m.p. 227° C. (corrected; decomposition). The chromatography of the hydrochlorides of the N-methyl derivatives of I-IV was carried out for 14 days on Whatman No. 1 in a phenol - water - ammonia system, and butanol - acetic acid - water (6:1:3). The values of R_f of the products refer to the value of R_f of the lysine hydrochloride and are expressed as $R_{(lysine)}$ (= 1) in phenol - NH : I 1.08, II 1.10, III 1.13, IV 1.12, 2) in butanol - acetic acid : I 1.33, II 1.41, III 1.48, IV 1 45.

Card : 7/7

G

CZECHOSLOVAKIA Natural Substances and
CATEGORY : Organic Chemistry
Their Synthetic Analogs
ABS. JOUR. : RZKhim., No. 23 1959, No. 82844

AUTHOR : Poduska, K.
INST. :
TITLE : Amino-Acids and Peptides. XXIII. Preparation and Chromatographic Behavior of Some N-Methyl Derivatives of DL-Lysine
ORIG. PUB. : Collect. Czechosl. Chem. Communs, 1959, 24, No 3, 1025-1028
ABSTRACT : No abstract.
See RZhKhim., 1959, No 24, No 81802.

CARD: 1/1

G-42

PODUSKA, K.; TITOV, M.I.

Amino acids and peptides. Pt.49. Coll Cz Chem 30 no.5:1611-1617 My '65.

1. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague. Submitted August 1, 1964.

RUDINGER, J.; PODUSKA, K.; ZAORAL, M.

Amino acids and peptides. XXIX. Synthesis of the lower homologues of L-arginine and L-citrulline. Coll Cz Chem 25 no. 8:2022-2028 Ag '60. (EEAI 10:9)

1. Department of Organic Synthesis, Institute of Chemistry, Czechoslovak Academy of Science, Prague.

(Amino acids) (Peptides) (Arginine) (Citrulline)

PODUSKA, Vl.

Measurement of performance parameters of small-grained coal washers. Paliva 44 no.9:284-286 S '64.

1. Zavody V.I.Lenina National Enterprise, Plzen.

PODUSHKO, Ye.V.; KOZLOVA, A.B.

Mechanism of the catalyzed crystallization of glass in the system $Li_2O - Al_2O_3 - SiO_2$ with titanium dioxide. Stekloobr. sost. no.1: 74-81 '63. (MIRA 17:10)

FLORINSKAYA, V.A.; PODUSHKO, Ye.V.; GONEK, I.N.; CHERNEVA, E.F.

Infrared spectra of vitreous and crystallized silicates in the system $Li_2O - Al_2O_3 - SiO_2 - TiO_2$ and their connection with structure. Stekloobr. sost no.1:90-99 '63. (MIRA 17:10)

KONDRAT'YEV, Yu.N.; PODUSHKO, Ye.V.

Investigating catalyzed crystallization by absorption changes.
Stekloobr. sost. no.1:101-104 '63. (MIRA 17:10)

KALININ, M.I.; PODUSHKO, Ye.V.

Crystallized glass on the basis of cordierite. Steklobr. sost. no.1: 164-166 '63. (MIRA 17:10)

ALEKSEYEV, A.G.; VARGIN, V.V.; VERTSNER, V.N.; KIND, N.Ye.; KONDRAT'YEV, Yu.N.; PODUSHKO, Ye.V.; SEREBRYAKOVA, M.V.; TIKHOMIROV, G.P.; TUDOROVSKAYA, N.A.; FLORINSKAYA, V.A.; LIBERMAN, N.R., red.

[Controlled catalyzed crystallization of glasses of the lithium aluminosilicate system] Kataliziravannaia reguliruemaia kristallizatsiia stekol litievoaliumosilikatnoi sistemy. Leningrad, Khimiia. Pt.1. 1964. 119 p. (MIRA 18:4)

RESHETNIKOV, N.P.; PODUSOVSKAYA, M.V.; YAGNISHCHAK, I.V.

Practices in drilling wells 5000 m. deep in Ukrainian geological formations. Trudy UkrNIGRI no.7:75-85 '63.
(MIRA 19:1)

PODUSOVSKIY, V. F.

"The Effect of Vitamin D_2 on the Dynamics of Clinical Morphological Changes in the Foci of Tuberculous Lupus Vulgaris." Cand Med Sci, L'vov State Medical Inst, L'vov, 1954. (KL, No. 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

USSR/General Problems of Pathology. Pathophysiology of Infection. U

Abs Jour: Ref Zhur-Biol., No 8, 1958, 37102

Author : Shtein, A.A., Zelikova, R.L., Podusovski, V.F.
Inst :
Title : The Effect of Disturbances of Innervation and Function of the Testicle on the Development of Experimental Leprosy in Rats.

Orig Pub: Zh. microbiol. epidemol. i immunobiologii, 1956 (1957) prilozhenie, 31.

Abstract: The nerve, innervating the seminal vesicles (S) and seminal ducts, was sectioned in 12 rats. An emulsion of a rat leproma was injected 2 weeks later in both S. The denervated S rapidly increased in size within 1½-2 months. Smears of the internal organs demon-

Card : 1/2

PODURETS, M.A.

Collapse of a star with allowance for counterpressure.
Dokl. AN SSSR 154 no.2:300-301 Ja'64. (MIRA 17:2)

1. Predstavleno akademikom Ya. B. Zel'dovichem.

PODUSOVSKIY, V.F.; KASTORNAYA, M.A. [deceased]; YAMPOL'SKIY, V.B.

Morphological changes in the brouchi in resected lungs from patients and their relation to postoperative complications. Probl. tub. 42 no.3:70-74 '64. (MIRA 18:1)

1. L'vovskiy nauchno-issledovatel'skiy institut tuberkuleza (direktor G.I.Chemeris, nauchnyy rukovoditel' - prof. I.T. Stukalo) i L'vovskaya oblastnaya protivotuberkuleznaya bol'nitsa (glavnyy vrach V.N.Kishakevich).

POBEGAYLO, V.M.; PODUSOVSKIY, V.F.; GLUKHEN'KIY, B.T.

Effect of ascorbic acid on the course of radiation sickness in white rats. Biol.deis. rad. no.1:58-63'62. (MIRA16:6)

1. Kafedra radiologii i rentgenologii L'vovskogo meditsinskogo instituta.
(ASCORBIC ACID) (RADIATION SICKNESS)

PODUSOVSKIY, V.F., kand. med. nauk; SHLAPAK, P.T., kand. med. nauk

Pathomorphological changes in the myocardium in chronic forms of tuberculosis of the lungs. Probl. tuberk. 41 no.2:64-71'63 (MIRA 17:2)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - kand. med. nauk G.I.Chemeris, nauchnyy rukovoditel' prof. I.T.Stukalo).

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S/858/62/000/001/007/013
D296/D307

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AUTHORS: Pobegaylo, V. M., Podusovskiy, V. F. and Glukhen'kiy, B.T.

TITLE: The influence of ascorbic acid upon the course of radiation sickness in white rats

SOURCE: L'vov. Universytet. Problemna lyaboratoriya radiobiolohiyi. Biologicheskoye deystviye radiatsii, no. 1, 1962, 59-63

TEXT: The present authors studied the clinical picture and morphological changes in the internal organs of 62 200 - 250 g white rats exposed to radiation emitted by P^{32}, administered by intraperitoneal injection, and treated with ascorbic acid. Of these, 32 rats were given a dose of 1.5 μc. In this group, 16 rats received no further treatment and served as control animals, and 16 rats were given 1.0 ml of a 5% ascorbic acid solution daily by intramuscular injection, until the animal died. The remaining 30 rats were given a dose of 2.5 μc. Here, too, 15 rats received no further

Card 1/3

The influence of ascorbic ...

treatment and served as control animals, and 15 rats were given ascorbic acid. After each animal's death (occurring at different times), the brain, lymph nodes, and all internal organs were investigated. In the control animals exposed to the smaller dose of 1.5 μc, a period of excitation lasting 8 - 10 hours was followed by apathy, pyrexia and loss of weight. After a period of apparent recovery, the animals' condition deteriorated again after 15 - 25 days. 50% of these animals perished of multiple hemorrhages in the mucous membranes, the serous membranes and all internal organs, showing loss of hair and ulceration of the skin. The rats slowly recovered. In the group exposed to the larger dose, all control animals perished within 21 days. During the first 20 days of treatment with ascorbic acid, no difference could be found between the experimental and the control animals, exposed to the smaller dose. Later, however, the clinical symptoms were much less marked, with all animals living longer and the greater proportion surviving. The experimental animals exposed to the larger dose perished without exception, but only after 48 days. In the control groups, autopsy revealed multiple hemorrhages in all internal organs and

on the mucous membranes, parenchymatous degeneration and necrosis, the latter particularly in animals exposed to the larger dose. The regenerative changes in the shape of the cell proliferation round the necrotic foci were insignificant. In the group treated with ascorbic acid, the degenerative changes and the hemorrhages were less marked and active cell proliferation could be observed round the foci of destruction.

ASSOCIATION: Kafedra radiologii i rentgenologii L'vovskogo meditsinskogo instituta (Department of Radiology and Roentgenology, L'vov Medical Institute)

S

USSR / Human and Animal Morphology (Normal and Pathological). Nervous System. Peripheral Nervous System.

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16927

Author : Podusovskiy, V. F.
Inst : Not given
Title : Pathomorphology of Nerve Endings of the Skin in Patients with Lupus Tuberculosis During Treatment with Vitamin D_2

Orig Pub : V sb.: Sovrem. vopr. dermatol. Kiyev, Gosmedizdat USSR, 1957, 136-141

Abstract : The neuroreceptor apparatus of the skin of 10 patients with lupus (25 biopsies) before and after treatment with vitamin D_2 was studied histologically. Before treatment, the nerve bundles and receptor apparatuses were

Card 1/3

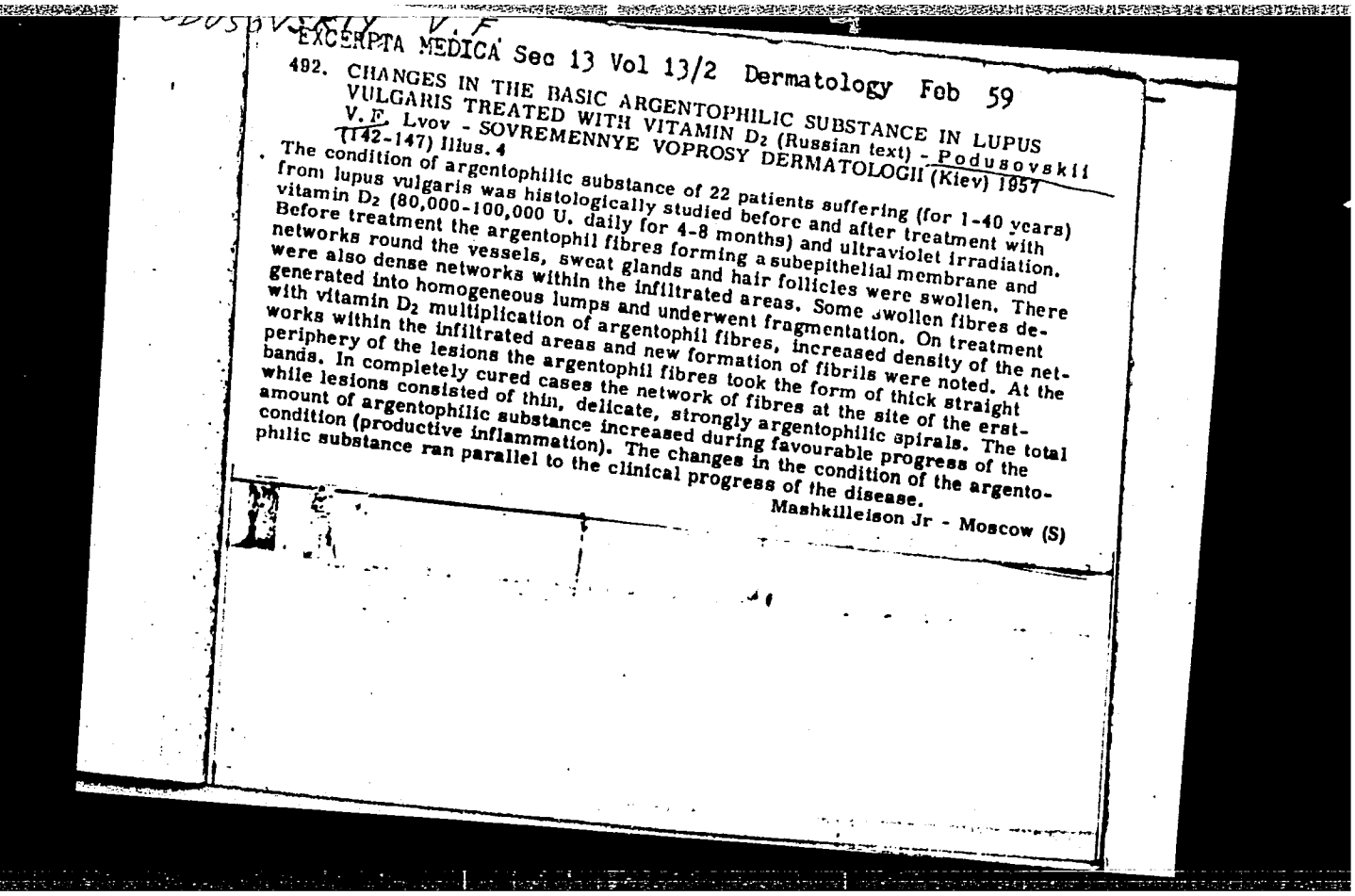
S

USSR / Human and Animal Morphology (Normal and Pathological). Nervous System. Peripheral Nervous System.

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 16927

not discovered in the tuberculosis infiltrate of the skin. Along the periphery of the infiltrate, thick sensitive fibers with nonuniform and variously-shaped swellings were found. Fragmentation of nerve fibers was observed. Thin vegetative fibers swelled only slightly. In the connective-tissue membranes of nerve trunks there was a round cellular infiltration. After recovery, in the unaffected skin and in the region of the scar, manifestations of irritation and regeneration of nerve fibers were observed. In patients with improvement of the process there were fragmentation,

Card 2/3

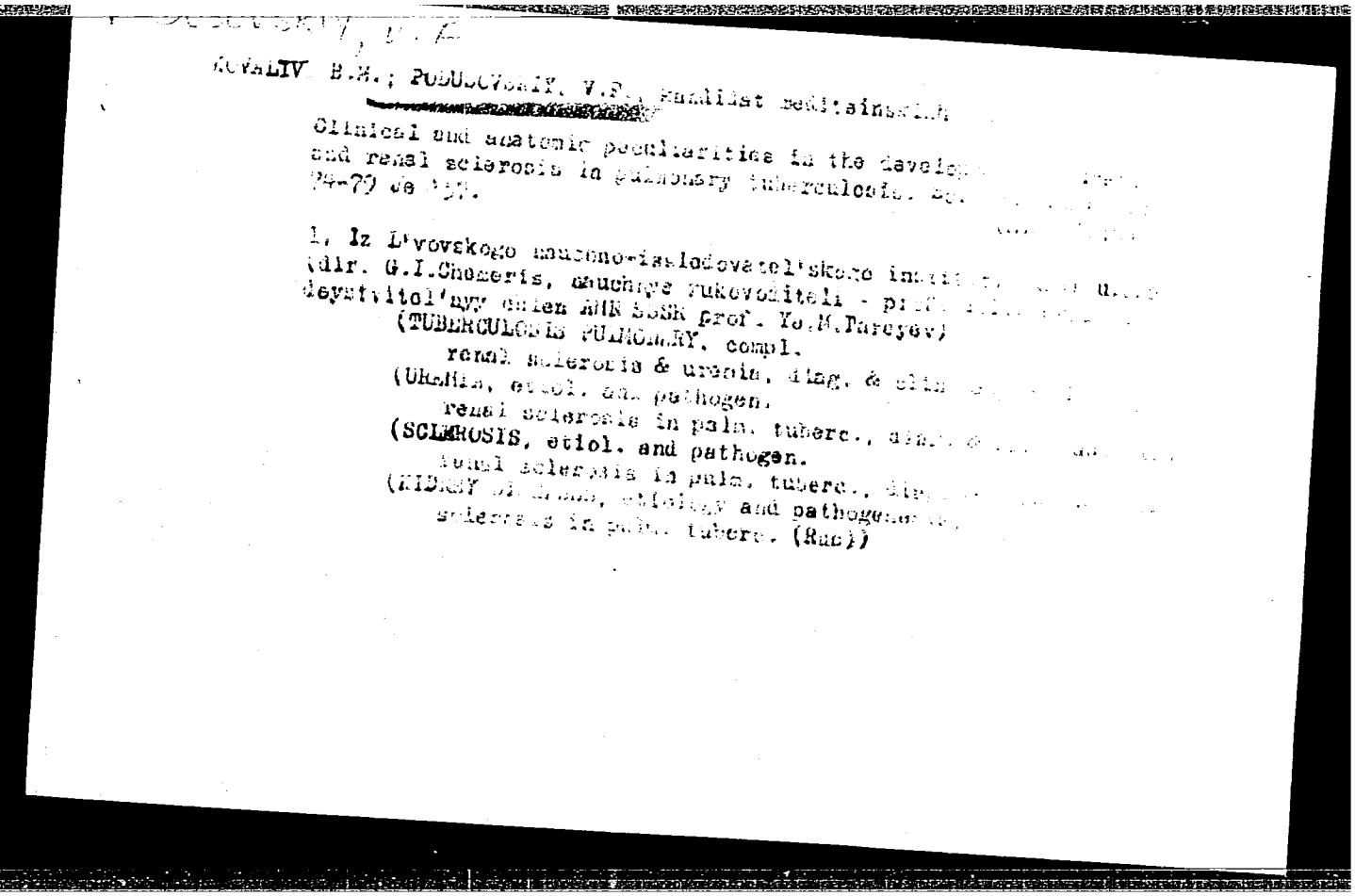


EXCERPTA MEDICA Sec 13 Vol 13/2 Dermatology Feb 59

492. CHANGES IN THE BASIC ARGENTOPHILIC SUBSTANCE IN LUPUS VULGARIS TREATED WITH VITAMIN D_2 (Russian text) - Podusovskii V.F. Lvov - SOVREMENNYE VOPROSY DERMATOLOGII (Kiev) 1957 (142-147) Illus. 4

The condition of argentophilic substance of 22 patients suffering (for 1-40 years) from lupus vulgaris was histologically studied before and after treatment with vitamin D_2 (80,000-100,000 U. daily for 4-8 months) and ultraviolet irradiation. Before treatment the argentophil fibres forming a subepithelial membrane and networks round the vessels, sweat glands and hair follicles were swollen. There were also dense networks within the infiltrated areas. Some swollen fibres degenerated into homogeneous lumps and underwent fragmentation. On treatment with vitamin D_2 multiplication of argentophil fibres, increased density of the networks within the infiltrated areas and new formation of fibrils were noted. At the periphery of the lesions the argentophil fibres took the form of thick straight bands. In completely cured cases the network of fibres at the site of the erstwhile lesions consisted of thin, delicate, strongly argentophilic spirals. The total amount of argentophilic substance increased during favourable progress of the condition (productive inflammation). The changes in the condition of the argentophilic substance ran parallel to the clinical progress of the disease.

Mashkilleison Jr - Moscow (S)



KOVALIV, B.M.; PODLOCHNIY, V.P., kandidat meditsinskikh

Clinical and anatomic peculiarities in the develop
and renal sclerosis in pulmonary tuberculosis. Sov.
24-29 de 1957.

1. Iz L'vovskogo nauchno-issledovatel'skogo in
(dir. G.I.Chomeris, nauchnye rukovoditeli - pr
devyatitol'nyy chlen AMN SSSR prof. Yu.M.Tareyev)
(TUBERCULOSIS PULMONARY, compl.
renal sclerosis & uremia, diag. & clin
(Uremia, etiol. and pathogen.
renal sclerosis in pulm. tubere.,
(SCLEROSIS, etiol. and pathogen.
renal sclerosis in pulm. tubere.,
(KIDNEY
sclerosis in pulm. tubere. (Rus))

KOVALIV, B.M., kand.med.nauk; PODUSOVSKIY, V.F., kand.med.nauk

Clinical, functional, and morphological characteristics of amyloid nephrosis in tuberculosis. Sov. med. 25 no.8:20-28 Ag '61. (MIRA 15:1)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - kandidat meditsinskikh nauk G.I.Chemeris, nauchnyye rukovoditeli - prof. I.T. Stukalo i deystvitel'nyy chlen AMN SSSR prof. Ye.M.Tareyev).

(AMYLOIDOSIS) (KIDNEYS--DISEASES)
(TUBERCULOSIS)